## AMENDMENTS TO THE CLAIMS

1. (currently amended) A method of managing memory mapped input output operations to an alternate address space comprising:

executing a first instruction directed to a first memory mapped input output alternate address space of a machine associated with a first adapter to allocate a resource associated with said first adapter to a selected process ~~in accordance with a definition of a z/Architecture~~;

wherein ~~a~~ said selected process issues at least one of a load and a store instruction executed in a problem state of said machine to a selected address location of a selected resource;

ensuring that said selected resource corresponds with said allocated resource; ~~and~~

determining that said selected process corresponds with said process to which said resource is allocated; and

executing a second instruction for modifying a previously allocated resource, wherein said second instruction is a privileged instruction that is executed in a supervisor state of a machine.

2. (currently amended) The method of Claim 1 further including a ~~second~~ third instruction for freeing an allocated resource of an adapter, wherein said ~~second~~ third instruction is a privileged instruction that is executed in a supervisory state of a machine.

3. (currently amended) The method of Claim 1 further including a ~~third~~ fourth instruction for storing a previously allocated resource, wherein said ~~third~~ fourth instruction is a privileged instruction that is executed in a supervisor state of a machine.

4. (cancelled)

5. (currently amended) ~~The method of Claim 1 further including~~ A method of managing memory mapped input output operations to an alternate address space comprising:

executing a first instruction directed to a first memory mapped input output alternate address space of a machine associated with a first adapter to allocate a resource associated with said first adapter to a selected process;

wherein said selected process issues at least one of a load and a store instruction executed in a problem state of said machine to a selected address location of a selected resource;

ensuring that said selected resource corresponds with said allocated resource;

determining that said selected process corresponds with said process to which said resource is allocated; and

disabling a memory region in said adapter such that said memory region may be enabled for another process, wherein said instruction is a privileged instruction that is executed in a supervisor state of a machine.

6. (original) The method of Claim 1 wherein at least one of said executing, said ensuring, and said determining is performed in a supervisory state of said machine.

7. (original) The method of Claim 1 wherein said selected process directly accesses said selected resource of said first adapter in said alternate address space.

8. (original) The method of Claim 1 wherein said first instruction is configured to prohibit said selected process from modification of said alternate address space.

9. (original) The method of Claim 1 wherein said first instruction is a privileged instruction that is executed in a supervisory state of a machine.

10. (original) The method of Claim 1 wherein said adapter translates main-address-space virtual addresses on which said adapter is operating into main-address-space real addresses within a given logical partition.

11. (original) The method of Claim 1 wherein said adapter includes its own memory caching with respect to resource contexts.

12. (original) The method of Claim 11 wherein said adapter caches its required memory contents from main memory of a machine.

13. (cancelled)

14. (currently amended) A system for managing memory mapped input output operations to an alternate address space comprising:

a means for executing a first instruction directed to a first memory mapped input output alternate address space of a machine associated with a first adapter to allocate a resource associated with said first adapter to a selected process ~~in accordance with a definition of a z/Architecture~~;

wherein ~~a~~ said selected process issues at least one of a load and a store instruction executed in a problem state of said machine to a selected address location of a selected resource;

a means for ensuring that said selected resource corresponds with said allocated resource; and

a means for determining that said selected process corresponds with said process to which said resource is allocated.